

In cases where it is not possible to widen the shoulder on both sides of the road, “differential” shoulder striping should be considered. This means that the possibility of widening the shoulder on the uphill side should be considered, as that is the side of the road where a slow-moving bicyclist is most likely to affect traffic flows. The provision of an extra one or two feet of shoulder on the uphill side on a narrow segment of roadway could allow enough extra room for vehicles to safely pass a cyclist without crossing the centerline.

As noted in Chapter 3, Caltrans is currently conducting a Project Study Report for SR-89 between the Placer County line and the Alpine County line to conduct water quality improvements. These improvements will include the provision of 4-foot shoulders along SR-89 where possible; this project is expected to be completed by 2010. While not intended as a bikeway project, many of the recommendations for shoulder widening identified in this Bikeway Study will occur as part of this water quality improvement project. This document makes general recommendations about the likelihood of achieving four-foot shoulders throughout the study area, and also notes where exceptions to a four-foot shoulder width are desirable from a cyclist safety standpoint. It should be noted, however, that a detailed engineering analysis of future locations of shoulder widening along SR-89 was outside the scope of this Bikeway Study, and will be completed as part of the design and engineering work for the SR-89 water quality project.

For all areas of the SR-89 alignment, shoulder widening that will impact wetland or SEZ areas will require consultation/permitting from RWQCB. In some SEZ or wetland areas, differential shoulder striping may be a possible alternative to four-foot shoulders on both sides. In other SEZ or wetland areas, reduced shoulders (e.g. two foot) on both sides may be a better alternative.

In areas where shoulder widening would parallel the proposed off-highway Class I bikeway, close coordination with RWQCB will be required to ensure that such parallel facilities will not result in significant SEZ or wetland disturbance. It is important to note that although proposed on- and off-highway bikeway facilities would be parallel, they are not duplicative in that they serve very different user groups. Wide shoulders would serve more experienced road cyclists, where the Class I off-highway facility would serve more casual or family cyclists. In areas where the presence of wetland or SEZ areas would prevent the development of parallel wide shoulders and Class I facilities, it is recommended that the Class I facility be maintained and the shoulder widths narrowed to reduce wetland/SEZ impacts.

SEGMENT 1: SPRING CREEK ROAD TO CASCADE CREEK

From Spring Creek Road north to Cascade Road, shoulder widening appears possible on both sides with minimal engineering.

From Cascade Road north, the roadway narrows and climbs along the side of the slope. Given the retaining walls on the upslope side and steep drop off downslope, achieving a four foot shoulder on both sides of the roadway may not be possible without major engineering. SR-89 flattens out and widens out as it approaches Cascade Creek; this area appears possible for 4 foot shoulders.

SEGMENT 2: CASCADE CREEK TO EMERALD BAY STATE PARK

From Cascade Creek to Inspiration Point, SR-89 is characterized by steep uphill grades, exposed slopes, switchbacks, and a section of roadway along the “razorback” ridge of the moraine. For most of this segment, development of four-foot shoulders will require substantial engineering and cut/fill. Along the moraine, where the roadway consists of two 10 foot lanes, additional shoulder can come only with cantilevering off the side, fill/retaining walls, or by lowering the entire roadbed by grading along the top of the ridge. All of these solutions would be extremely costly, and could have substantial environmental impacts. While shoulder widening through this area is highly desirable, ultimate determination of whether it is possible given the costs, engineering, and environmental impacts will be made by Caltrans as part of the SR-89 shoulder widening project.

In the immediate vicinity of the Inspiration Point parking area, the topography flattens out and widening SR-89 appears possible with minor engineering.

From Inspiration Point to Vikingsholm, there appears to be intermittent room for shoulder widening. However, throughout this area the potential for vehicle parking in the shoulder (for the views of Emerald Bay) becomes a primary concern. Widening the shoulder to four feet to accommodate bicyclists may have the undesirable effect of providing more informal parking spaces along the highway, and actually worsening cycling conditions by having the shoulder completely blocked by parked vehicles and increasing the number of cars pulling on and off the highway. Through discussions with the TAC, four foot shoulders were determined to be too wide for this segment, in that they would allow a car to pull almost completely off the roadway into the shoulder; requiring bicyclists to swerve out into the travel lane to get around the parked cars. Although “No Parking” signs and enforcement could help reduce the incidence of this problem, many violators would be one-time visitors to the area and issuing a ticket would not have the desired effect of discouraging future behavior. The TAC concluded that the shoulder widening design for the Emerald Bay area would need to be designed to provide additional room for cyclists, but not allow enough room for vehicles to park. It was concluded that two foot shoulders would be an appropriate desired width for the Emerald Bay area (although acknowledged that even two foot shoulders may not be possible in some constrained areas).

In areas where additional unpaved width is available next to the two foot paved shoulder, it was decided that some type of wall or barrier would be necessary to prevent vehicles from using the unpaved part of the roadway to park. This brings up the issue of snowplows, which would require a smooth, defined roadway edge. For this reason, simply placing boulders at the edge of the paved roadway surface (to prevent vehicles from pulling off the pavement) would not work, as they would not provide a guide for the snowplow blade. Alternative barrier treatments such as K-Rail may not be possible for this area due to scenic considerations, although alternative K-Rail or barrier treatments



K-Rail Duplicating Look of Historic Stone Wall

that duplicate the look of the area's natural stone walls are possible (see photo). Specific designs for any barriers would need to be developed by Caltrans in conjunction with TRPA once final plans for shoulder widening are in place.

From Vikingsholm to the top of the Viaduct, the roadway width is fixed by the width of the Viaduct. Some shoulder widening through this location may be possible through lane restriping.

SEGMENTS 3 AND 4: EMERALD BAY STATE PARK TO MEEKS BAY

North of the top of the Viaduct, there generally appears to be sufficient roadway width to add four-foot shoulders the entire distance to Meeks Bay. There are some exceptions at constrained points, such as the area just south of the D.L. Bliss State Park entrance, but wide shoulders already exist along much of this segment of highway.

TRANSIT/SHUTTLE BUS

Given that the engineering and environmental analysis concluded that a Class I or other off-street bike path would not be possible for the entire length of the study corridor, other options were examined for ensuring access for more family-type cyclists who do not want to ride on the road or are unable to ride the steep hills involved in the route. One option considered was the provision of transit or shuttle options, either through use of existing transit vehicles or a new bike trailer

One benefit of bike shuttles is that people may be more willing to try and bicycle all or parts of the corridor if they are assured that they can get a ride back or “bail out” of the ride along the way if the hills get too steep.

A key shuttle stop location would be the intersection of Spring Creek Road/SR-89, along with informational signage and maps showing options for access to Emerald Bay State Park. This signage would focus on recreational riders who reach the end of the Pope-Baldwin Bike Path and wish to continue on.

Other bike shuttle stops would be placed at major visitor destinations along the route. These would include:

- Eagle Point Campground
- Inspiration Point/Bayview
- Eagle Falls Parking Area
- Vikingsholm Parking Area
- Emerald Bay Park Service Road (new major transit stop, described below)
- D.L. Bliss State Park Entrance
- Lester Beach

- Paradise Flat (at bottom of grade up to D.L. Bliss)
- Meeks Bay Resort and Marina

For locations with visitor attractions, such as Vikingsholm and Eagle Falls, features such as bike racks would need to be installed. This would permit a person to cycle to that location, lock up their bike and hike around the Park, then take a shuttle back to the starting point.

In conjunction with the Off-Highway Bikeway option discussed above, a new shuttle/transit stop near the Emerald Bay service road is recommended. While this location would not get cyclists all the way to the Vikingsholm Parking area, it would bring them into the northern portion of Emerald Bay State Park, where they could walk down the service road and access hiking trails into the park to reach the Vikingsholm area. A shuttle stop or trailhead located near the Emerald Bay service road would be preferred compared to one at the Vikingsholm parking lot location. The main reason for this preference is the grade of the viaduct section and difficulty this section would produce for the casual cyclist. Key features of the transit/shuttle stop at this location would be a pullout for a shuttle bus, clear signage indicating bicycles are not allowed to use the Emerald Bay service road, bike racks for cyclists to lock up their bikes if they wish to hike down toward Vikingsholm, and other amenities such as benches and directional/mileage signs for cyclists wanting to continue on-road toward Eagle Falls/Inspiration Point or South Lake Tahoe. If space is available, construction of a small number of parking spots may be desirable to reduce pressure on the Vikingsholm lot.

WATER FERRY

Discussions of a water ferry option generally led to the conclusion that a bicycle water ferry is a unique and potentially viable option for bicycle recreation and transit, but that there are two distinct paths to its development: 1) in terms of bicycle transit, increased bicycle access on ferries and improved ferry stops/service should be part of the broader scope of improving waterborne transit throughout the Tahoe Basin; and 2) in terms of a unique recreational activity, a bicycle-only ferry pilot project could be implemented and run by a local non-profit or bicycle advocacy group.

A key issue related to the water ferry discussion, was whether such a bicycle water ferry would enter Emerald Bay, dock at Emerald Bay, or simply bypass Emerald Bay in a direct trip between the Camp Richardson and Meeks Bay areas. It was assumed that trips that entered into Emerald Bay would attract more users. However, these types of trips would serve through-cyclists less, in that the trip length would be significantly increased by entering Emerald Bay. In terms of a bicycle ferry docking at Emerald Bay, the major issue was what bicyclists would do with their bicycles. The Vikingsholm/Emerald Bay area does not permit bicycling, therefore cyclists would simply be required to lock their bikes up upon disembarking.

For a non-profit pilot project, the bike ferry option was viewed as being a modified pontoon boat or other small craft that could accommodate bicycles, in order to keep costs down, and allow docking at existing landings in Camp Richardson and Meeks Bay. However, due to the small size of such watercraft, the trip between these locations could be too long to attract cyclists. In addition, the ferry would not have the ability to allow visitors to get off and explore areas between the two

landing points. As such, this type of service would likely be more oriented more as a recreational experience, rather than an efficient means of connecting between destinations along the study corridor

SUMMARY

If all of the preferred bikeway concepts identified in this chapter were implemented, the SR-89 corridor would be more accessible to a wide range of cyclists, from experienced road riders to casual family cyclists on rented bikes. In order to truly be effective, these improvements would need to be performed in conjunction with new transit stops on either end of the corridor and in South Lake Tahoe, reduced parking at the Emerald Bay/Vikingsholm area, improvements to reduce informal parking along the shoulder of SR-89, and improved bicycle facilities at the major destinations along the corridor. Taken together, the Preferred Concept options would result in a substantial change in the way that visitors access the Emerald Bay/Vikingsholm areas, shifting from the current automobile-oriented trips to a more sustainable non-motorized and transit-oriented focus. In the long term, these changes would be expected to improve enjoyment of the SR-89 corridor for visitors and local residents alike, by reducing traffic congestion and improving the overall recreational experience at Emerald Bay.